

The Transfer of U.S. Tungsten Carbide Technology
to the USSR and its Military Application

1. New intelligence confirms that the Soviets intend to use tungsten-based powdered-metallurgical technology acquired from the West to improve the lethality of their kinetic-energy anti-tank ammunition. Furthermore, we believe this effort derives from Dresser Industries sales to the USSR. Soviet researchers have successfully adapted Western manufacturing process know-how to harden a Soviet domestic tungsten-based alloy for use in kinetic-energy penetrators with improved mechanical properties. The acquired manufacturing process know-how involved includes specifications for making tungsten-alloy powders, as well as molding and sintering techniques. [REDACTED]

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2. The nature of the technology involved, and the timing of successful Soviet efforts to harden their domestic alloy, suggest to us that the foreign manufacturing know-how the Soviets acquired probably was supplied as part of the drill bit turnkey plant built by Dresser Industries in Kuybyshev, USSR. Technical specifications Dresser Industries provided to the USSR during 1978-79 included the know-how to vary precisely the composition of tungsten-carbide powders used to make sintered drill bit cones. Denial of further start-up assistance at the Kuybyshev plant probably would stretch out the time required for the Soviets to assimilate the technology for volume production of improved kinetic-energy penetrators. [REDACTED]

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